

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 10/608,533  
Attorney Docket No. Q76265

### **REMARKS**

Upon entry of the Amendment, Claims 1, 9-16 and 19-22 are all the claims pending in the application. Claims 9-14, 16, and 19-22 have been withdrawn from consideration. Claims 1 and 15 are presently under consideration.

Claims 2-8 and 17-18 have been canceled. Claim 1 and 15 have been amended. Support for the amendments to Claims 1 and 15 can be found in the specification, such as lines 6-7 on page 8 and lines 12-13 on page 9. Therefore, no new matter has been added.

#### **I. Claim Rejections - 35 U.S.C. § 101**

Claims 1-8 and 17-18 have been rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter.

Applicants respectfully submit that Claim 1 has been amended and is presently drawn to an isolated reductase. Reconsideration and withdrawal are respectfully requested.

#### **II. Claim Rejections - 35 U.S.C. § 112**

Claims 1-2 and Claims 3-8 and 17-18 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants respectfully submit that Claim 1 has been amended. Claim 1 no longer recites the term “having.” Further, Claim 1 has clarified that the reductase is a variant of SEQ ID NO: 1. Reconsideration and withdrawal are respectfully requested.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 10/608,533  
Attorney Docket No. Q76265

Further, Claim 15 has been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 has been amended so that it no longer recites the phrases “the reduction reaction” and “heat stability of said enzyme is improved.” Reconsideration and withdrawal are respectfully requested.

Additionally, Claims 1-8, 15 and 17-18 have been rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in such a way as to reasonably convey to one skilled in the relevant art that the inventors at the time the application was filed, had possession of the claimed invention.

Applicants respectfully submit that Claims 1 and 15 presently recite subject matter sufficiently described in the specification. In Example 6, the specification describes extracting reductases from transformants for measuring the reductase activity thereof. In Example 3, the specification describes producing transformants having a reductase in which the lysine at position 245 and asparagine at position 271 were replaced. Example 3 describes that oligonucleotides having either SEQ ID NO: 5 or 7 were used. A person of ordinary skill in the art would understand that these oligonucleotides provided an arginine at position 245 or an aspartic acid at position 271. Further, Example 4 describes producing DNA encoding both an arginine at position 245 and an aspartic acid at position 271. Therefore, Applicants respectfully submit that Claim 1 is sufficiently described.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 10/608,533  
Attorney Docket No. Q76265

Further, Applicants respectfully submit that Examples 3 and 4 also provide for a sufficient description of the method recited in Claim 15.

### **III. Double Patenting**

Claims 1-8, 15 and 17-18 have been provisionally rejected under 35 U.S.C. § 101, as allegedly claiming the same invention as that of Claims 1-14, 21, and 23-24 of copending U.S. Patent Application No. 10/608,625 ("the '625 application").

Applicants respectfully submit that Claim 1 and 15 are not identical to Claims 1-14, 21, and 23-24 of the '625 application. Claims 1 and 15 of the present application recite substitutions at amino acid positions 245 and 275, but not at amino acid position 54 or 104, as in the '625 application. Reconsideration and withdrawal are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 10/608,533  
Attorney Docket No. Q76265

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


Respectfully submitted,

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

  
\_\_\_\_\_  
John T. Callahan  
Registration No. 32,607

Date: April 11, 2006